

REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of November 2, 2005.

Reexamination and reconsideration are respectfully requested.

Status of the Claims

Claims 1-24 remain in this application. Claims 13-21 have been withdrawn.

The Office Action

The Restriction Requirement

Claims 13-21 and 24 were withdrawn from consideration. Claims 22 and 23 have been rewritten in independent form, as proposed by the Examiner. Claims 13 and 24 are now dependent on claim 1. It is respectfully requested that, should an allowable claim be found, rejoinder of these claims be permitted.

The §102 and S103 Rejections

Claims 1-7, 22, and 23 stand rejected under 35 USC §102(b) as being anticipated by US Patent No. 2,306,925 to Aicher.

Claims 8-12 stand rejected under 35 USC §103(a) as being as unpatentable over Aicher.

For the reasons outlined below, it is submitted that the claims are in condition for allowance.

Claim 1 recites a discharge lamp which includes an electrode including a current carrying wire and a coil including at least first and second coiled structures. The first coiled structure is formed by winding an overwind wire around a first cylindrical member. The second coiled structure is formed by winding the first coiled structure around a second cylindrical member, the second coiled structure having a coil density of at least 95%.

The Examiner points to page 4, bottom of first column to top of second column of Aicher as illustrating a discharge lamp having a second coiled structure with a coil density of at least 95%.

Aicher makes no suggestion of a secondary coil of a lamp with a coil density of at least 95%. Rather, Aicher refers to pitch. The term "pitch" is commonly used for metric

threads and is generally the distance in millimeters between the two turns. However, Aicher is using this term in a different way. It appears that Aicher's "pitch" may be the distance between turns in units of turn diameter.

Aicher discloses, at the bottom of the left hand column on page 4, forming a second coil using a structure Mb (Fig. 7) which appears to have a total diameter of about $2.33+1.5+1.5 = 5.53$ mils = 0.00533 inches. This structure is then said to be wound at 115 turns per inch around a round mandrel wire of 11.5 mil molybdenum.

As noted in the specification, the coil density of winding (or pitch ratio) S, can be calculated from the expression:

$$\text{Oil density, } S = [h/s_2] * 100 \quad \text{and is expressed as a percentage, where}$$

h is the size of the turn and s_2 is the distance between centers of successive turns.
Since $s_2=1/\text{tpi}$

In the case of Aicher's structure:

$$\begin{aligned} \text{Coil density} &= h * \text{tpi} * 100\% \\ &= 0.00533 * 115 * 100 = 61.3\% \end{aligned}$$

Thus, Aicher's "pitch" (125%) is not a measure of the coil density. Other examples used in the specification give coil densities of 67% and 75% respectively. Aicher does not disclose the presently claimed coil density.

Accordingly, it is submitted that claim 1 and claims 2-12 and 24 dependent therefrom are patentable over Aicher.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-24) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

In the event that the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call the undersigned, at Telephone Number (216) 861-5582.

Respectfully submitted,

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